

SULFURYL FLUORIDE: SUMMARY OF FIELD TRIALS IN FLORIDA AND GEORGIA

Tony Weiss¹, *John Busacca¹ and John Mirusso²

¹Dow AgroSciences LLC, Indianapolis, IN

²Mirusso Enterprises, Boynton Beach, FL

Sulfuryl fluoride, as Vikane™, has been used successfully as a structural fumigant for more than 40 years and has been used more recently as ProFume™ for post harvest uses. However, it has not been tested extensively for pre-plant uses under raised bed planting conditions using plastic mulch. Successful soil tests in micro-plots using sulfuryl fluoride as a pre-plant soil fumigant were conducted in 2008. These proof-of-concept tests led to expanded testing in small plot field trials in Florida and Georgia in 2009.

Standard injection equipment used to apply methyl bromide was modified slightly to provide uniform application of sulfuryl fluoride. Rates of 300 – 500 pounds per treated acre (pta) of sulfuryl fluoride were compared to a standard methyl bromide: chloropicrin (50:50) treatment at 400 lbs pta. Trials were conducted in Florida and Georgia to determine efficacy against nutsedge (*Cyperus spp.*), which was the primary target pest, soil borne diseases and nematodes in various crops. Standard LDPE and Blockade™ films were compared as mulch barriers during testing.

Results show sulfuryl fluoride provided control of all pests tested and shows promise as a broad spectrum pre-plant soil fumigant in addition to its current labeled uses as a structural and post-harvest fumigant.

Tripod. Trademark of Dow AgroSciences LLC

Blockade. Trademark of Pliant Corporation.